

REMARKS

In the Office Action dated August 7, 2008, claims 1-5, 7-11, 13-15, and 24 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,708,595 (Maloney); claim 6 was rejected under 35 U.S.C. § 103(a) as unpatentable over Maloney in view of U.S. Patent No. 2,894,587 (McCulloch); and claims 16, 18-20, and 22 were rejected under 35 U.S.C. § 103(a) as unpatentable over Maloney in view of U.S. Patent No. 5,031,697 (Wellington).

It is respectfully submitted that claim 1 is not anticipated by Maloney. The Office Action equated the “tubular member” of claim 1 with the sidestring pipe 28 of Maloney, and equated the “gas lift valves” of claim 1 with the unloading valves 30 of Maloney. Note, however, that the unloading valves 30 of Maloney are not intended to operate when pressurized gas (34a) is injected through a valve in an “mme” mandrel 34 into the sidestring pipe 28. As specifically stated by Maloney, the gas passes through the valve in the mme mandrel 34 into the sidestring pipe 28 and **passes by the unloading valves 30 and through a connector 26 (located below the unloading valves 30).** Maloney, 2:58-64.

In fact, during the lifting cycle (to lift a volume of liquid in a chamber 23 at the bottom of the equipment depicted in the figure of Maloney), the pressurized gas is injected through the valve in the mme mandrel 34 into the sidestring pipe 28, and continues down the sidestring pipe 28 to the chamber 23 to force the volume of liquid (“liquid slug”) to the surface through the production string 21. *Id.*, 3:66-4:11. To allow the liquid slug to be pushed upwardly by the pressurized gas, it is noted that the unloading valves 30 should remain **closed** to allow the pressure within the production string 21 to remain lower than the pressure in the sidestring pipe 28, such that the liquid slug can be pushed upwardly in the production string 21. If the unloading valves 30 were to open during the gas lift cycle, then the pressure on the two sides of the liquid slug (in chamber 23) would be equal, such that the liquid slug could not be raised to the surface.

It is also noted that Maloney teaches intermittent gas lifting of liquids, where some amount of liquid is allowed to fill the chamber 23 before pressurized gas enters the sidestring pipe 28 and causes the volume of liquid to be lifted to the surface. Following lifting of the volume of liquid to the surface, the chamber 23 is allowed again to refill with liquid through the bottom valve 24 shown in the figure of Maloney. *Id.*, 4:22-27. As specifically taught by Maloney, the unloading valves 30 “are set to open and close at pressures above the set pressures

of the operating valve in the 'mme' mandrel 34," and therefore, "the unloading valves do not interfere with the [intermittent] cycles of the well." *Id.*, 3:35-39. What this statement means is that the unloading valves 30 remain closed during the lift cycle, such that pressurized gas does not escape from the sidestring pipe 28 into the production string 21 to interfere with the lifting of the volume of liquid through the production string 21 to the surface.

Therefore, in view of the teachings of Maloney, it is respectfully submitted that Maloney does not disclose the following subject matter of claim 1: a plurality of gas lift valves attached to the tubular member, where the gas lift valves are adapted to regulate communication, via corresponding orifices, from the axial bore of the tubular member to the wellbore at or below the perforation interval, where the gas lift valves are configured to be opened in response to application of pressure applied by a flow of gas injected to the axial bore of the tubular member, and where the gas is injected through each of the gas lift valves that is opened to assist production of fluid from the wellbore. What happens in Maloney is that the gas (34a) injected into the sidestring pipe 28 flows down the sidestring pipe 28 to the chamber 23 of liquid to force the volume of liquid upwardly through the production string 21. This pressurized gas does not cause the unloading valves 30 to be opened to enable gas to be injected through the valves 30 to assist production of fluid from the wellbore.

In view of the foregoing, claim 1 is clearly not anticipated by Maloney.

Amended independent claims 7, 13, and 14 are similarly allowable over Maloney.

Independent claim 22 was rejected as purportedly obvious over Maloney in view of Wellington. The Office Action conceded that Maloney fails to disclose gas lift valves actuated at different pressures. 8/7/2008 Office Action at 5. However, the Office Action cited Wellington as disclosing this feature of claim 22. As conceded by the Office Action, although Wellington shows gas lift valves 8 that can be operated at different pressures, the gas lift valves of Wellington are located above a perforation interval. Thus, Wellington does not disclose injecting gas into the wellbore at or below the perforation interval using an injecting tool having plural gas lift valves that are actuated at different pressures.

The Office Action argued that the teachings of Wellington are "applicable to any gas lift system ... since the principles of operation are the same." 8/7/2008 Office Action at 5. It is noted, however, that the unloading valves 30 of Maloney serve different purposes than the gas

lift valves of Wellington. As explained above, lifting of gas in Maloney is accomplished by forcing pressurized gas against a volume of liquid (23) to force the volume of liquid up through the production string 21. As also explained above, Maloney contemplates that its unloading valves 30 should not be operated during the lift cycle to avoid interference with the lifting of the volume of liquid. It appears that the unloading valves 30 of Maloney are used mainly for pressure relief purposes between the sidestring pipe 28 and the production string 21. Therefore, there would be absolutely no reason to incorporate unloading valves 30 having different pressure actuation points, as doing so would serve no purpose. A person of ordinary skill in the art would not have understood from the teachings of Maloney that it would be advantageous to incorporate the gas lift valves 8 of Wellington in place of the unloading valves 30 in Maloney.

In view of the foregoing, it is respectfully submitted that a person of ordinary skill in the art would not have been prompted to combine the teachings of Maloney and Wellington to achieve the claimed invention.

Therefore, the obviousness rejection of claim 22 is defective.

Dependent claims are allowable for at least the same reasons as corresponding independent claims. In view of the allowability of base claims, it is respectfully submitted that the obviousness rejections of dependent claims have been overcome.

Allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (SHL.0343US).

Respectfully submitted,

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